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Australia

Biofuels Annual

Biofuels Annual 2010

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Report Highlights:
Australia's overall energy production continues to exceed its energy consumption. Despite the energy surplus, Australia is a new importer of liquid hydrocarbons. Post estimates biofuels capacity for 2009 at 739 ML, representing about 456 ML of ethanol and 283 ML of biodiesel. Post estimates that ethanol production capacity increased in 2009 by around 267 ML to reach 456 ML. Actual ethanol production increased by around 54 ML to reach 203 ML. Post estimates biodiesel capacity for 2009 at 283 ML, up on 136 ML estimated for the previous year. Post estimates biodiesel production for 2009 at 98 ML, up on the 54 ML estimated for the previous year. On June 22, 2010 Australian Customs and Border Protection Service launched concurrent dumping and countervailing duty investigations into U.S. exports of pure biodiesel, specifically B99, and biodiesel blends.

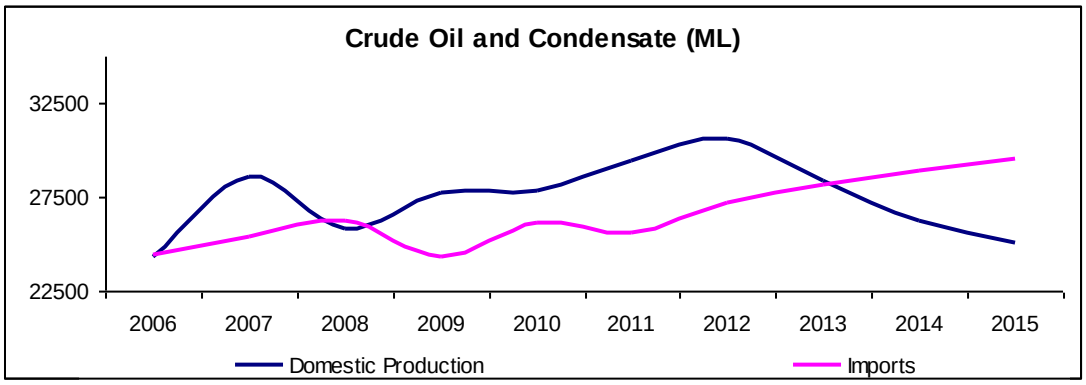
Post: Canberra

Executive Summary:

Australia's overall energy production continues to exceed its energy consumption making Australia a significant net energy exporter. For example, according to the Australian Bureau of Resource Economics (ABARE), Australian proven resources of uranium account for 38 percent of the world's uranium resources and Australia's proven brown coal resources represent around 24 percent of the world's brown coal resources.

In terms of energy sustainability, at current levels of production, Australia's proven reserves of brown coal, black coal and conventional gas are expected to last 500 years, 100 years and 60 years, respectively.

Despite the energy surplus, Australia is a net importer of liquid hydrocarbons (including crude oil, liquid petroleum gas (LPG) and other refined and semi-refined petroleum products). Australian reserves of crude oil and condensate represent only a small proportion of total world reserves.



Source: ABARE data

In 2009, Australia was estimated by ABARE to have produced 29,456 ML (million liters) of crude oil and condensate (up from 27,797 the previous year), export about 17,671 ML and import 26,164 ML. This places Australian consumption of crude oil and condensate at around 37,949 LM for 2009. Long term projections have production peaking at 30,619 ML in 2012, exports peaking at 18,984 ML in 2012 and imports peaking at 29,564 ML in 2015.

Post estimates biofuels capacity for 2009 at 739 ML, representing about 456 ML of ethanol and 283 ML of biodiesel. Government believes this figure to represent the absolute upper limit of production capacity, however post advises that this figure does not include plants that have been mothballed for the foreseeable future. According to an Australian government reports, biofuel accounts for around 0.4 percent of total transport fuel consumption.

Actual biofuel production is dependant upon the proportion of capacity that can be utilized by biofuel plants. Factors that influence this are profitability, supplies of feedstock, competition from imports and plant closures (due to maintenance, technical difficulties or discontinuation of production). According to industry sources, productivity between plants varies widely. For ethanol plants, post estimates an industry average of roughly 50 percent capacity utilization for 2009. For biodiesel this figure is closer to 30 percent. Post advises that estimates for capacity utilization vary widely between sources.

Production of biofuels in Australia received much media attention in 2007 and 2008. The primary driver in biofuel interest appears to be energy prices. As energy prices have increased, so too has pressure on governments to find alternate energy sources.

A secondary driver for biofuels policy has been the debate over climate change. The occurrence of a severe and prolonged drought, the worst in over 100 years, bought the climate change debate

center stage. However the current Australian government, which is still serving its first term, has deferred plans to implement its Emissions Trading Scheme (ETS). Despite being a central policy in its election platform, the supporting legislation was unable to attract enough votes to pass through the Australian Senate. At present, the biofuels industry continues to operate under the arrangements made by the previous government.

At a regional level within Australia, many ventures into biofuel production, using locally produced grain, have been proposed. However, most ventures have either been shelved or abandoned and a small number of large producers continue to dominate the industry.

On June 22, Australia's Customs and Border Protection Service launched concurrent dumping and countervailing duty investigations into U.S. exports of pure biodiesel and biodiesel blends. The investigation findings should result in recommendations being made on or before November 24, 2010 and may result in anti-dumping and/or countervailing duties being levied against U.S. biodiesel.

1. Policy and Programs

International

Australia has been a member of the APEC biofuels task force since its inception in 2006. This task force was created by APEC in response to high oil prices in that same year. Other member countries of the APEC biofuels task force include Canada, Japan, Korea, New Zealand, Singapore, Chinese Taipei, Thailand, the United States and Viet Nam. Malaysia, Mexico and Brazil subsequently joined the group.

The main objective of the biofuels task force is to assist APEC members to better understand the potential for biofuel to displace oil in transport. The working group is part of the APEC Energy Security Initiative.

Federal

In 2007, Australia elected a new Federal government. The new Federal Government has not yet made any substantive policy changes in regards to biofuel. The Federal government was largely voted into office on the strength of its environmental policies, namely global warming and carbon reduction. However, its Emissions Trading legislation, the spearhead of its environmental policy, failed to gain the necessary support to become law and it has since been delayed.

Biofuel policy changes were expected to be driven at the Federal level by the release of the Federal Government's "energy white paper" originally scheduled to be released in 2009. At time of writing this report, local media is suggesting the Federal Government has ceased working on it, despite having received submissions from stake holders.

At a national level, the Federal government has a broad range of policy instruments that affect the production of biofuels. These instruments include a production target, fuel taxes (excise), fuel quality standards, grants and labeling (as reported in GAIN Report AS 7032). Sources suggest that the production target of 350 ML by 2010 has effectively been dropped with government no longer referring to this policy.

At the time of writing this report, both locally manufactured ethanol and biodiesel continue to enjoy effective freedom from Federal excise taxes, currently applied to diesel and petrol at AU$0.38143 per liter. Both ethanol and biodiesel pay excise, if produced in Australia and "excise equivalent customs duty" if imported from overseas at a rate of AU$0.38143 per liter.

Biodiesel is reimbursed AU$0.38143 per liter through the "Energy Grants (Cleaner Fuels) Scheme" which is administered by the Australian Taxation Office. This assistance is applied to both locally produced and imported
biodiesel. http://www.ato.gov.au/businesses/content.asp?doc=/content/51553.htm

Ethanol is reimbursed through the "Ethanol Production Grants" program which is administered by Ausindustry (A division of the Federal Department of Energy Resources and Tourism). However, only locally produced ethanol is eligible for reimbursement. Imported ethanol cannot be reimbursed the excise equivalent customs duty of AU$0.3814 per liter.
http://www.ausindustry.gov.au/EnergyandFuels/EthanolProductionGrantsEPG/Pages/EthanolProductionGrants(EPG).aspx

Effective excise will be introduced from 2011-12 to 2015 - 16 in five equal steps so that by 2015-16 all ethanol will have an effective excise rate of 12.5 cents a liter and all biodiesel will have a rate of 19.1 cents per liter

Biofuels Excise Rates for Australia				
Fuel Type	**Ethanol**		**Biodiesel**	
	Excise Applied	Effective Relief	Excise Applied	Effective Relief
2005/06	0	38.1	0	38.1
2006/07	0	38.1	0	38.1
2007/08	0	38.1	0	38.1
2008/09	0	38.1	0	38.1
2009/10	0	38.1	0	38.1
2010/11	0	38.1	0	38.1
2011/12	2.5	23.4	3.8	32.1
2012/13	5.0	20.9	7.6	28.3
2013/14	7.5	18.4	11.4	24.5
2014/15	10.0	15.9	15.3	20.6
2015/16	12.5	13.4	19.1	16.8
Source: ABARE data				

Despite the lack of a defined policy statement on biofuel production, the recent Federal Government budget confirmed that biofuel producers would effectively begin to be charged an increasing portion of excise from July 2011 onwards. Post expects the Federal Excise rates outlined below to proceed as scheduled.

EFFECTIVE FUEL TAX RATES FOR ALTERNATIVE FUELS							
Fuel Type	***Energy Content Band***	***1-Jul-2010***	***1-Jul-2011***	***1-Jul-2012***	***1-Jul-2013***	***1-Jul-2014***	***1 July 2015 (final rate)***
Biofuels							
Biodiesel (c/L)	High	0.0	3.8	7.6	11.4	15.3	19.1
Domestic Ethanol (c/L)	Mid	0.0	2.5	5.0	7.5	10.0	12.5
Imported Ethanol (c/L)	Mid	38.1	25.0	21.9	18.8	15.6	12.5
Other alternative fuels							
Liquefied petroleum gas (c/L)	Mid	nil	2.5	5.0	7.5	10.0	12.5
Liquefied natural gas (c/L)	Mid	nil	2.5	5.0	7.5	10.0	12.5
Methanol (c/L)							
Compressed natural gas(c/m^3)	Other	nil	3.8	7.6	11.4	15.2	19.0
The excise rates listed in this Table are the 'effective' excise rate. That is, these listed rates represent the net effect following decreasing offsetting grants to reflect the effective rate each year over the transition period to the final rate.							
Source: Treasury Table 2011 Rates May 14 2010							

State

The state of New South Wales will increase its volumetric mandatory inclusion policy for ethanol. Under this legislation, by 2011, the mandatory volumetric inclusion level of ethanol in petrol will be ten percent. Industry sources believe that this will equate to roughly 120 ML of ethanol per year, while government sources believe this could generate as much as 380 ML of demand. This follows the volumetric mandated level of two percent implemented in 2007. Under a volumetric mandate, each supplier of wholesale fuel for sale is required to provide evidence that total ethanol sales equal or surpass the volumetric mandate set out in the mandate. According to sources, the NSW mandate is expected to become the primary driver of ethanol demand in Australia.

The state of Queensland has committed to a mandate of volumetric inclusion of five percent by 2011 (From December 31, 2010 onwards). As part of the preparation process for this legislation, the State Government of Queensland published a public benefit test which outlines the impact of a five percent volumetric mandate. The report suggested that the mandate would likely increase current demand in the State of Queensland to 183 ML, up from 60 ML at present. Post expects increases in national production in 2011 and 2012 to cover increased the demand in Queensland.

The states of Victoria, Western Australia, Tasmania, South Australia and the Northern Territory do not have mandatory inclusion policies. However, industry sources suggest that these governments continue to investigate mandatory inclusion policies.

Federal Government Programs

Ethanol Production Grant Program - This program pays grants to ethanol producers at a rate of AU$0.38143 per liter, equal to the excise equivalent customs duties. The ethanol must be produced entirely in Australia from biomass feedstock and used as a transport fuel. Imports of ethanol are not eligible for grants under this program. The program commenced on September 18 2002 and is schedule to conclude on June 30 2011. Effective excise will be introduced from 2011-12 to 2015 – 16 in five equal steps so that by 2015-16 all ethanol will have an effective excise rate of 12.5 cents. Ausindustry administers the program on behalf of the Department of Resources Energy and Tourism.
http://www.ausindustry.gov.au/EnergyandFuels/EthanolProductionGrantsEPG/Pages/EthanolProductionGrants(EPG).aspx

Energy Grants (cleaner fuels) Scheme - This scheme aims to provide assistance for manufacturers and importers of cleaner fuels. This program commenced in 2003 and, as part of a host of measures, effectively offsets the AU$38.143 per liter customs duty payable on biodiesel by effectively paying the excise equivalent customs duties on locally made and imported biodiesel from 2003 until 2008. From 2008 until 2012 the grant will be reduced to zero in five even annual installments.
http://www.ato.gov.au/businesses/content.asp?doc=/content/51553.htm

Biofuels Capital Grants program – This program is aimed at increasing the availability of biofuels for the domestic transport market. It funded one-off projects that provided new or improved biofuels production capacity. The grants were provided at a rate of AU$0.16 per liter for projects producing a minimum five million liters per annum. According to government sources, a total of AU$31.74 million dollars was awarded under this program.

Ethanol Distribution Program – This program provided grants of up to AU$20,000 to retailers of transport fuel who incurred infrastructure costs in order to supply ethanol blended petrol (E10). This program was available for work completed between October 1 2006 and April 30 2008 and supported a total 947 retail fuel outlets. A further **Sales Target Grant** of up to AU$10,000 was available for those sites which reached a specified sales target within one year of completing the work.

Second Generation Biofuels Research and Development Program – This program supports the research, development and demonstration of new (second generation) technologies and feedstocks. This program is expected to allocate AU$15 million and will run from 2009/10 to 2011/12. The program will fund up to fifty percent of the total cost of an eligible project and so far AU$12.617 million has been allocated to seven projects.

Energy Grants Credit Scheme - Biodiesel Fuel Tax Credits are available for the use of biodiesel or biodiesel blends where fuel meets the biodiesel fuel standard. This program commenced in July 2006 and ran until July 2010. Grants payable began at AU$0.1408 in 2006 and reducing in five equal steps to AU$0.00 in 2010. As a condition of the program, fuel must be used in vehicles that are over 20 MT in gross weight unless operating inside metropolitan areas.

2. Bio Ethanol

2.1 Production

Post estimates that ethanol production capacity increased in 2009 by around 267 ML to reach 456 ML (including 120ML of capacity not included in the ABARE table on the following page). Actual ethanol production increased by around 54 ML to reach 203 ML, largely in line with government sources. Many plants are currently operating below potential capacity making it difficult to estimate actual production.

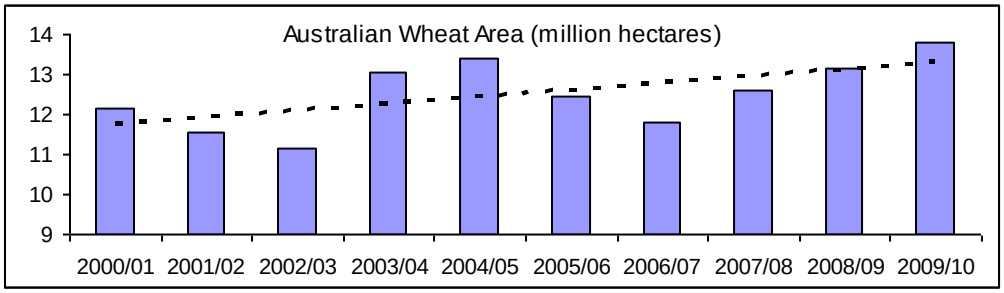
Conventional & Advanced Bioethanol (million liters)						
Year End July	2006	2007	2008	2009	2010	2011
Production	40	84	149	203	260	320
Imports	0	0	0	0	0	0
Exports	0	0	0	0	0	0
Consumption	40	84	149	203	260	320
Ending Stocks	1	2	3	4	5	6
Production Capacity (Conventional Fuel)						
No. of Biorefineries	3	4	4	4	4	4
Capacity	120	120	189	456	456	480
Source: Source: Australian Government, the Department of Resources, Energy and Tourism/Post estimate						

Post expects any significant increase in demand to be driven by state mandates such as the mandate in NSW.

Suitable feedstock supply for biofuel production, such as grain, reached historically low levels during the prolonged and severe drought which began in 2002. Post estimates have production of winter cereals and sorghum returning to near average levels in 2010. Post expects another big wheat crop in 2010 and this will continue to build inventories of potential feedstock.

Grain prices have fallen sharply over the past year due to increase global supply and a stronger Australian dollar. Increased grain inventories and reductions in grain prices will likely benefit biofuel producers who rely on grain and grain derivatives for feedstock.

Production of other agricultural commodities such as sugar and molasses remain at around average levels; however competition and prices of these commodities has increased significantly due to increased global demand.



Source: ABARE data

Liquid Biofuels Production Facilities in Australia, 2009

Fuel Ethanol		
Location	***Capacity ML/yr***	***Feedstocks***
Manildra Group, Nowra, NSW	180	Waste wheat starch, some low grade grain
CSR Distilleries, Sarina, QLD (North Queensland)	60	Molasses
Dalby Biorefinery, Dalby, QLD	90	Sorghum
Total	330	

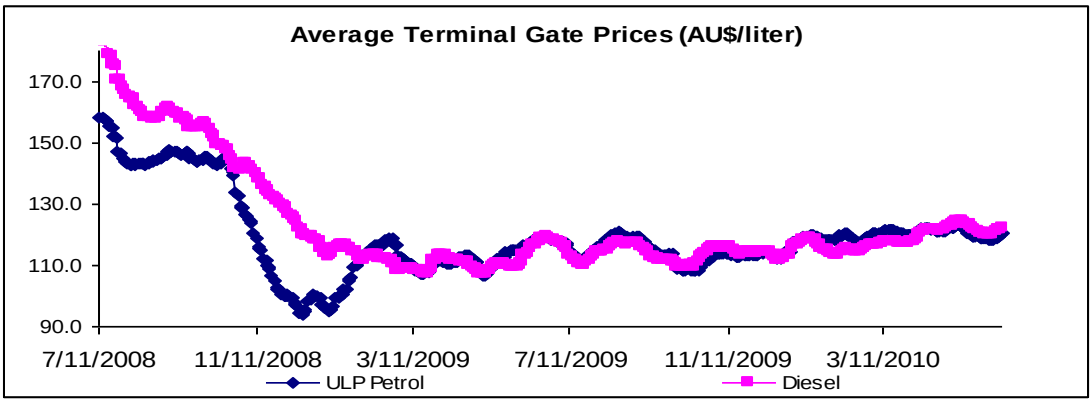
Source: ABARE data

2.2 Consumption

According to the department of Resources Energy and Technology (RET), total consumption of petroleum products for 2009 is estimated at 50,630 ML and is projected by ABARE to increase steadily to 61,463 ML in 2014. Automotive gasoline makes up about 55 percent of Australia's transport fuel demand while diesel represents about 45 percent. Liquid Petroleum Gas (LPG) is included in this petrol figure and represents about 8.4 percent of "non-diesel" transport fuels.

According to government reports, the demand for diesel has been growing roughly three percent faster than automotive gasoline which has been growing at a rate of about 1.2 percent. Despite the growth in diesel fuel consumption, the overwhelming majority of new cars sold in Australia are run on automotive gasoline.

Retail prices for transport fuels have fallen from the record high levels of 2008 and this is expected to constrain bigger increases in production of biofuel over the medium term. This indicates that consumption has fallen to be more in line with supply. However, since the global financial crisis prices have firmed slightly and are expected to continue rising slowly for the foreseeable future.



Source: Australian Institute of Petroleum

According to ABARE, Australia currently has the lowest pre tax price for transport fuel and the fifth lowest post tax price in the OECD (behind Mexico, the United States, Canada and New Zealand).

2.3 Trade

Australia has placed tariffs on imported ethanol which, according to sources, can usually be imported below the cost of local production. The excise equivalent customs duty of $A 0.38143 cents per liter (which, unlike biodiesel, cannot be reimbursed by government programs) reduces the competitiveness of imported fuel ethanol, particularly from Brazil. The production cost of Brazilian ethanol is reported to be well below the cost of production for Australian ethanol. Furthermore, according to government sources, imported ethanol also attracts a tariff of five percent. These measures have effectively prevented commercial trade in ethanol for consumption as transport fuel.

3. Biodiesel

3.1 Production

Post estimates biodiesel capacity for 2009 at 283 ML up on 136 ML estimated for the previous year. This includes around 30 ML of capacity not listed in ABARE's facilities table. Post estimated biodiesel production for 2009 at 98 ML, up on the 54 ML estimated for the previous year.

Going forward, the upward capacity for biofuel production remains large. Four additional plants are currently under consideration and together these have the capacity to lift biofuel production to 945 ML by 2014, however sources believe that it is likely that only one of these plants will be constructed in the future.

Conventional & Advanced Biodiesel (million liters)						
Year End July	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Production	44	43	54	98	60	60
Imports	2	5	4	12	3	3
Exports	0	0	0	0	0	0
Consumption	46	47	58	110	63	63
Ending Stocks	2	2	2	6	7	9
Production Capacity (Conventional Fuel)						
No. of Biorefineries	7	7	9	8	8	8
Capacity	612	174	136	283	283	283
Source: Government of Australia, the Department of Resources, Energy and Tourism/World Trade Atlas/Post Estimate						

Supplies of by-products for biodiesel such as tallow will likely improve in the future due to improved seasonal conditions and the prospect of fatter slaughter cattle. Supplies of waste vegetable oil, the other large feedstock source for biodiesel, will likely remain largely unchanged.

Liquid Biofuels Production Facilities in Australia, 2009		
Biodiesel		
Location	***Capacity ML/yr***	***Feedstocks***
Biodiesel In Production		
Biodiesel Industries Australia, Maitland, NSW	15	Used cooking oil, vegetable oil
Biodiesel Producers Limited, Wodonga, Vic	60	Tallow, used cooking oil
Smorgon Fuels, Melbourne, Vic	100	Dryland juncea (oilseed crop), tallow, used cooking oil, vegetable oil
Various small producers	5	Used cooking oil, tallow, industrial waste , oilseed
Total Biodiesel In Production	180	
Biodiesel Limited Production		
Australian Renewable Fuels, Adelaide, SA	45	Tallow
Australian Renewable Fuels, Picton, WA	45	Tallow
Total Biodiesel Limited Production	90	
Biodiesel Plants not in Production		
Eco-Tech Biodiesel, Narangba, Qld	30	Tallow, used cooking oil

Source: ABARE data

3.2 Biodiesel Trade

Post estimates puts biodiesel imports for 2009 at 12.47 ML, up sharply on the 4.12 ML estimated for the previous year. Post advises that biodiesel imports occur in a sporadic nature.

Post has used HS codes 3824.90.30.46 and 3824.90.20.20 to estimate imports. Post advises however, that other biodiesel imports may have been recorded under other HS codes (such as 2710.11.80.11, 2710.19.80.21 and 2710.91.80.82).

Australian Imports of Biodiesel (Liters)							
	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010** (Jan-Mar)
Biodiesel Component Of Blends Of Biodiesel And Oth HS 3824.90.30.46	0	0	0	0	1,599,210	1,367,340	18,069
Biodiesel Manufactured By Chemically Altering Vege 3824.90.20.20	0	0	2,144,814	5,154,193	2,523,420	11,104,577	2,536,029
Total Liters	**0**	**0**	**2,144,814**	**5,154,193**	**4,122,630**	**12,471,917**	**2,554,098**

Source: World Trade Atlas data

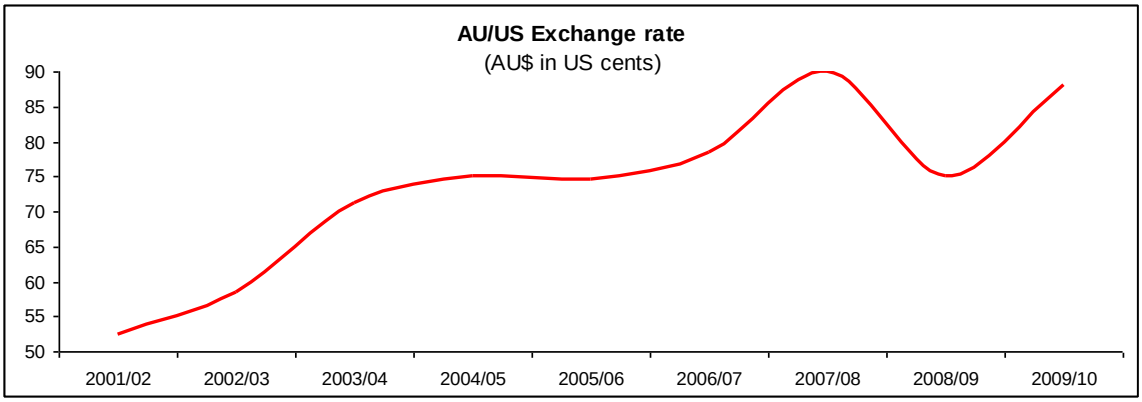
Post estimates put imports of biodiesel from the U.S. at 11.12 ML for 2009 and no imports of biodiesel from the U.S. were recorded for the previous year (under HS codes 3824.90.30.46 and 3824.90.20.20).

Australian Imports of U.S. Biodiesel (Liters)							
	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010** (Jan-Mar)
Biodiesel Component Of Blends Of Biodiesel And Oth HS 3824.90.30.46	0	0	0	0	0	18,069	0

Biodiesel Manufactured By Chemically Altering Vege 3824.90.20.20	0	0	0	1,204,232	0	11,104,107	2,536,029
Total Liters	**0**	**0**	**0**	**1,204,232**	**0**	**11,122,176**	**2,536,029**

Source: World Trade Atlas data

The sporadic nature of biodiesel imports is most likely due to the fluctuating and high value of the Australian Dollar (which boosts imports), relatively strong economic growth in Australia, and the availability of biodiesel on the international market.



Source: ABARE Data

On June 22, Australia's Customs and Border Protection Service launched concurrent dumping and countervailing duty investigations into U.S. exports of pure biodiesel, specifically, B99, and biodiesel blends above 20 percent, during the period from April 1, 2009 through March 31, 2010. The investigation findings should result in recommendations being made on or before November 24, 2010 and may result in anti-dumping and/or countervailing duties being levied against U.S. biodiesel. This is similar to the EU case from 2008. U.S. biodiesel exports to Australia have been infrequent and it is not a key market for U.S. suppliers. Post estimates put U.S. exports of biodiesel to Australia at less than 1 percent of total U.S. exports, making Australia a very small market for the U.S. by global standards.

4. Advanced Biofuels

Investigations conducted by post have not revealed any commercial production of advanced biofuels. Industry sources believe that Australia will not likely lead the world in production of advanced biofuels but will likely follow other countries. However, many new developments have occurred in advanced fuel sources for non-transport energy such as landfill gas, sewerage gas and wood waste.

5. Bio Mass for heat and power

According to ABARE, renewable energy accounts for around five percent of Australia's total energy consumption. Biomass electricity production in Australia is provided (almost exclusively) by the Australian sugar industry which produces its own electricity (as well as a surplus) using Bagasse as a fuel source. Bagasse accounts for over one third of renewable energy production according to ABARE data.

Australian Production of Renewable Energy (PJ)						
	2002/03	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Bagasse	95.1	101.1	108.3	109.1	110.8	111.9
Wood and Woodwaste	105.3	97.3	91.5	90.3	92.8	96
Biogass and biofuel	10.7	10.1	8.7	9.4	10.2	17.6
Hydroelectricity	59.4	58.8	56.2	57.7	52.3	43.4
Wind	1	1.6	3.2	6.2	9.4	14.2
Solar Hot Water	2.8	2.6	2.6	2.4	6	6.5
Solar Electricity	0.2	0.3	0.3	0.4	0.4	0.4
Total	**274.5**	**271.7**	**270.8**	**275.5**	**281.9**	**290**
**Source: ABARE, Energy in Australia 2010*						

The primary driver of Australia's renewable energy development is the Australian Governments Mandatory Renewable Energy Target (MRET) which aims to increase Australia's electricity generation from renewable sources by 9,500 gigawatt hours per year by 2010. The source which have experienced the greatest growth under this policy are wind and solar. Recent legislation, passed in August 2009 commits the Australian government to ensuring that 20 percent of Australia's electricity is generated from renewable sources by 2020.